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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,112	02/04/2002	Henricus Renier Gerardus Steeghs	ASC5695US2	7400

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EXAMINER
ANDREWS, MELVYN J

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-12

Office Action Summary	Application No.	Applicant(s)	
	10/067,112	STEEGHS ET AL.	
	Examiner	Art Unit	
	Melvyn J. Andrews	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,7-9,11,12,15-17,19-22,24-26 and 37-47* is/are pending in the application.

4a) Of the above claim(s) *9,11,12,15,16,22,24-26,37-40,42 and 44-46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,7,8,17,19-21,41,43 and 47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 4, 7, 8, 41 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banyai et al, U.S. Patent No.4,919,711. Banyai et al discloses a binder composition for metal-containing ores but does not disclose specific example of a binder of guar and sodium citrate but does disclose guar (see col.4, line 4) and sodium citrate (see col.4, line 11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate a binder including guar and sodium citrate because they are disclosed as suitable for the Banyai et al formulation; but Banyai et al does not explicitly disclose, as in Claim 1, a process of commingling metallic ore with a moistening effective amount of water and a binding effective amount of a weak acid , but it reasonably appears that metal ions in the water will combine with the acid to form a salt such that the recitation of adding these components such as citric acid is tantamount to reciting that a salt of the weak acid is added.

Response to Arguments

Applicants' arguments of March 11, 2003 are not persuasive.

Applicants argue that no evidence has been provided that sodium citrate if added to water will form citric acid but this is well known as the state of the art that sodium citrate and water will be expected to form an acid as evidenced by Hacks' Dictionary which lists **s.citrate** and **s. acid citrate** as soluble in water (page 618, col.2, lines 3-9)

, **citrate** a salt containing the radical $C_6H_5O_7$ = from citric acid (page 161, col.2, lines 2-5) and **citric acid** as soluble in water (page 161, col.2, lines 12-18) which is evidence that sodium citrate and citric acid are in equilibrium in water so that if sodium citrate was added to water citric acid would be expected to be present and if citric acid was added to water sodium citrate would be present since water used to form a binder would probably include metal ions, such as sodium.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., wet and dry strengths of pellets of (guar-citric acid) compared with (guar-sodium-citrate) and (a lower pH) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claims 1, 3, 4, 7, 8, 41 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banyai et al as applied to claims 1, 3, 4, 7, 8, 41 and 47 above, and further in view of Rooda et (U.S .4,597,797). The patent to Banyai et al does not explicitly disclose "a binding effective amount of malic acid, tartaric acid or mixtures thereof" but discloses that exemplary inorganic salts include not only sodium citrate but also the salts described by Roorda et al (U.S. 4,288,245) (see Banyai et al col.4, lines 5 to 11) which discloses compositions for agglomerating a metal-containing ore material which include salts derived from tartaric acid and citric acid (col.1,line 58 to col.2, line 2), it would have been obvious to one of ordinary skill in the art at the time the invention

was made to substitute tartaric acid for citric acid in the Banyai et al formulation because tartaric acid and citric acid are regarded as equivalents for inclusion in binder formulations.

Claims 1, 3, 4, 7, 8, 41 and 47 rejected under 35 U.S.C. 103(a) as being unpatentable over Banyai et al, alone or in view of Rooda et al as applied to claims 1, 3, 4, 7, 8, 41 and 47 above, and further in view of Stafford (U.S. 3,591,543). The patent to Banyai et al explicitly discloses sodium citrate(col.4, line 11) and Rooda et al explicitly discloses a salts derived from weak acids such as tartaric acid and citric acid (col.1, lines 53 to 65) but do not explicitly add weak acids but Stafford (U.S. 3,591,543) discloses a method of gelling in which there also must be present a water-soluble organic acid salt such as sodium citrate, the salt may be added as such or it may be formed in situ, for example by the addition of a water-soluble organic acid of 1 to 6 carbon atoms and a water soluble alkali metal hydroxide oxide (col.4, lines 17 to 21), it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a salt such as sodium citrate as disclosed by Banyai et al and Rooda by adding citric acid together with sodium hydroxide to cause the formation of the salt.

Response to Arguments

Applicants' arguments of March 11, 2003 are not persuasive.

Applicants argue that Rooda et al adds a salt of tartaric acid not a weak acid, but the addition of a salt of tartaric acid would be expected to form tartaric acid in water as evidenced by Hacks' Dictionary which lists **tartaric acid** as soluble in water (page 662, col.1, line 55 to col.2, line 8 , **s.tartrate** as soluble in water (page 621, col.2, lines 56-

58) and **tartrate** is a salt of tartaric acid (page 662, col.2 , lines 13-14) which is evidence that sodium tartrate and tartaric acid would be in equilibrium in water, so that if sodium tartrate was added to water tartaric acid would be expected to be present and if tartaric acid was added to water sodium tartrate would be expected to be present since water used to form a binder would be expected to include metal ions, such as sodium.

Applicants argue that Stafford there is no reason to combine the teachings of Stafford but the examiner does not agree since Stafford relates to soil stabilization by consolidating soil with a water-soluble organic acid which is equivalent to an agglomerating process, such as agglomerating ore

Claims 17, 19, 20, 21 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banyai et al, U.S. Patent No.4,919,711. Banyai et al discloses a binder for metal-containing ores but does not disclose a specific example of a binder of guar and sodium citrate but does disclose guar (see col.4, line 4) and sodium citrate (see col.4, line 11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate a binder including guar and sodium citrate because they are disclosed as suitable for the Banyai et al formulation.

Response to Arguments

Applicants' arguments of March 11, 2003 are not persuasive. Applicants argue that Banyai et al discloses that the presence "other substances" such as sodium citrate and guar and that these together would not be expected to be a binder composition but this opinion is not supported by any evidence that components of the Banyai et al binder

composition such as sodium citrate and/or guar would not be expected to enhance or cause the Banyai et al binder composition to function as useful for agglomerating ore.

Election/Restrictions

This application contains claims 9,11,12,15, 16, 22, 24-26, 37-40, 42 and 44-46 drawn to an invention nonelected with traverse in Paper No. 6. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is 703-308-3739. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Melvyn Andrews

MELVYN ANDREWS
PRIMARY EXAMINER

mja
May 30, 2003